

AMENDMENT TO THE CLAIMS

Please amend the claims to be as follows.

1. (canceled)
2. (currently amended) A method for temporally filtering a video sequence, the method comprising:
 - using object motion estimation for arbitrarily shaped segments to align corresponding pixels between at least two frames by a temporal filtering apparatus;
 - determining segments that are no longer adjacent to a segment boundary based on said object motion estimation by the temporal filtering apparatus;
 - reducing impact of color blur from said segments that are no longer adjacent by adjusting weights assigned to one or more frames for pixels that lie within a blur region near said segment boundary by the temporal filtering apparatus;
 - setting the weight for one or more past frames to zero for pixels that lie within a newly exposed area; and
 - computing a weighted average of color values of said corresponding pixels by the temporal filtering apparatus.
3. (canceled)
4. (previously presented) The method of claim 2, further comprising:
 - determining additional motion information across GOP boundaries to allow filtering across these boundaries.
5. (previously presented) The method of claim 2, further comprising:

calculating a lighting offset which expresses a difference in lighting for a segment between two frames; and using said lighting offset to correct lighting discrepancies caused by averaging pixels from frames with different lighting.

6. (currently amended) An apparatus for temporally filtering a video sequence, wherein object motion estimation for arbitrarily shaped segments is used to align corresponding pixels between at least two frames and to determine segments that are no longer adjacent to a segment boundary, wherein weights assigned to one or more frames are adjusted for pixels that lie within a blur region near said segment boundary to reduce impact of color blur from said segments that are no longer adjacent to said segment boundary, wherein a weight for one or more past frames is set to zero for pixels that lie within a newly exposed area, and wherein said apparatus computes a weighted average of color values of said corresponding pixels.

7. (canceled)

8. (currently amended) A method for temporally filtering a video sequence using motion compensation, the method being performed by a temporal filtering apparatus and comprising:

estimating motion of objects between frames in the video sequence;

aligning pixels from a current frame with matching pixels from select neighboring frames according to the estimated motion of a surrounding object;

calculating a weighted average of the aligned pixels for each pixel in the current frame to produce a filtered version of the current frame; [[and]]

adjusting weights used to calculate the weighted average in order to compensate for blur transitions near object boundaries due to temporal changes in adjacent objects;
and

setting a weight for one or more past frames to zero for pixels that lie within a newly exposed area.

9. (original) The method of claim 8, wherein the adjustment of weights comprises a reduction of a weight multiplier in a blur region near an exposed area.

10. (original) The method of claim 8, wherein the adjustment of weights comprises a reduction of a weight multiplier in a blur region between converging objects.
11. (previously presented) The method of claim 8, wherein the estimation of motion is between frames that are across a group of pictures (GOP) type boundary which does not involve a scene change.
12. (previously presented) The method of claim 8, further comprising:
 - calculating a lighting offset; and
 - applying the lighting offset prior to calculating the weighted average in order to compensate for lighting shifts.